

Edited by
E. Haldeman-Julius

B-536

Effects of Castration on Men and Women

ACCIDENTAL, VOLUNTARY AND INVOLUNTARY CASTRATION
EUNUCHISM AND HISTORY—MEDICAL TREATMENT
AND ASPECTS

By D. O. CAULDWELL, M.D., Sc.D.

Effects of Castration on Men and Women

ACCIDENTAL, VOLUNTARY AND INVOLUNTARY CASTRATION
EUNUCHISM AND HISTORY—MEDICAL TREATMENT
AND ASPECTS

By D. O. CAULDWELL, M.D., Sc.D.

HALDEMAN-JULIUS PUBLICATIONS
GIRARD, KANSAS

Copyright, 1947
By E. Haldeman-Julius

Printed in The United States of America

I. INTRODUCTION

Castration consists in removing, surgically or otherwise, the testicles of the male or the ovaries of the female. The practice is doubtless older than history. It is reasonable to believe it to be as old as mankind.

Time, that intricate entity which, paradoxically, has all value or no value, is held by many to be without beginning or end. One may resort to philosophical license, however, and say that when time becomes meaningless, it ends when meaningless begins.

Absolute knowledge of the beginning of mankind is as much a crux criticorum as is speculation concerning the beginning of time. It is unthinkable that mankind did not appear on the face of the earth prior to the most probable date of the Garden of Eden story. The bowels of the earth have yielded positive evidence of the existence of mankind during the Pleistocene age and this age would have been more than a mere jaunt from the era during which the Garden of Eden tale emerged. We therefore know that mankind is old—quite old.

In addition to knowing that mankind is old, we know that man has ever been a warring animal. In the far away quaternary epoch when man met man and men fought, it is reasonable to believe that fighting was crude as well as cruel. And regardless of man's degree of intellect at the time, we may more than reasonably assume that he had learned of his highly vulnerable spots—and hence, the vulnerable spots of any man who might become his adversary.

The privates—secrets, also called the testicles—must have been as vulnerable in early man as in man of today. This being true, it is reasonable to assume that adversaries of the Pleistocene age, indulged in the practice of castrating each other.

The definition of a eunuch is: A man whose testicles have been removed. . . . This brings us to the conclusion that eunuchs existed during the early age of mankind.

As to when the practice of castration of women began, there is more or less doubt. It stands to reason that this occurred much later in history than was true in the case of the male—*homo sapiens*.

Historians have by no means settled the date of the first Caesarian operation upon the female. Nor are all of the known historical facts always immediately available to one seeking to establish that which is known of facts and conjecture. It is not at all likely that woman was castrated earlier than she was delivered of child through an incised opening in the wall of her belly.

Indeed, man castrated man long before the testicles were known or even believed to have anything to do with either reproduction or the act of sexual intercourse. The reason why man did this has already been explained. It was untold ages later that knowledge of the reproductive functions of the ovaries was discovered. Indeed, prior to this discovery, it was not known that the ovaries had anything to do with sexuality.

Investigators have given out statements through the press indicating that evidence has been uncovered that what we now know as the Caesarean operation was performed upon woman eons before the time of Julius Caesar. The belief was expressed that the operation was performed by women midwives. History corroborates any theory that remote man rarely did any "intimate" doctoring on the female of the species.

Regarding the Caesarean operation, the following, abstracted from

The Medical Times, appeared in the December, 1946, issue of *Serology* (New York):

"Palmer Findlay writes that 'so far as the records show, the Caesarian operation was not performed on the living woman in the time of Julius Caesar. It is therefore evident that the name of the operation was not derived from the alleged manner of birth of Julius Caesar. It is believed that the expression (Caesarian operation) was derived from the *lex regia*, which ordered that an abdominal operation must be performed on all dead and dying women when in the advanced stages of pregnancy. Later the *lex regia* became known as the *lex cesaria* and from this law the name cesarian was derived.'"

The quotation is a classical fact. It does not indicate that the operation, regardless of by what name it was known, was not performed, as has been explained, long before the time of Julius Caesar.

The practice of castrating women is of comparatively recent origin. That the practice has become quite extensive will be revealed later.

In various instances woman has been castrated as a means of controlling her. The practice of castrating the male of the human species, however, is at least as old as history, and except when man was castrated during a fight, whether such was personal combat or in war, the castration was performed as a means of control. This does not apply to more recent practices of castration as a health measure or a measure calculated to save life.

Ever so often man suffers castration through accident. Accidents have completely torn away the entire external genitalia. Likewise, accidents have caused the male to undergo surgical castration as a means of saving his life.

Men have sought castration for reasons of their own and these reasons will be revealed herein. This is, of course, what is known as voluntary castration. Women often seek castration. Castration has been forced upon both males and females. This is involuntary castration. And, finally, there is *legal* castration. As you read this book you may find much that will surprise you. And it will be a surprising thing if, when you read the facts concerning legal castration and the scientific version of what it accomplishes and fails to accomplish, you are not more than mildly startled.

When we contemplate the possibilities of accident and disease we realize at once that anyone may lose an eye, an arm, a hand, a foot or a leg. We know that every day in the hospitals of the country surgery is taking something away from individuals with which they were originally endowed. Appendices are excised. Tonsils are removed. A higher percentage of women than you would be likely to suspect, are giving up their wombs and fallopian tubes to the surgeon's knife. Gall bladders are daily removed from persons who have been unfortunate enough to develop pathology. Teeth are extracted in untold numbers. Women are being castrated. Indeed, what man or woman is there who can say that tomorrow or next week some surgeon will not have his testicles or her ovaries in his pickling brine?

Who then, it is reasonable to ask, is not interested in the effects of castration on both sexes? And who is not interested in knowing what medical science can do toward rehabilitating those who are so unfortunate as to have to undergo castration?

These matters will be made plain. And, it is well to explain now, that the most important effects of castration may be explained in a few words, but that each case is a law unto itself. Volumes may be filled, as indeed they have been filled, with the effects in individual cases. Each case represents a partial biography within itself. A summary of common effects, however, is most interesting and may be most valuable, to each individual.

To merely plunge into a summary of effects and treatment before viewing the background of castration, and looking somewhat into its history, would be a little like eating old-fashioned strawberry shortcake without the modern embellishment of added whipped cream. Let us therefore look into the history of castration and follow it down to the present when, under certain circumstances, one may choose between submitting to castration and being imprisoned for life. This latter does not sound modern—nor indeed does crucifixion—but both are being done, and with greater frequency than you might imagine.



II. EUNUCHS—CASTRATED MEN

Eunuchs—castrated men—have often been said to be “men who are not men.” This is not altogether true. Nor can the eunuch always be called a castrated man. When castration is performed upon the small male child, that child, though he live to a ripe old age, never actually becomes a man. On the other hand, males castrated after they were fully developed men, have married and have been known to have regular coitus.

Even normal males are part male and part female. This is the natural status. It has been well stated, however, that: “The eunuch is neither he, she nor it, but possesses some of the traits of all three.”

At one time in history men became religiously fanatical and, devoting themselves wholly to their religions, either castrated themselves or had the castration operation performed by someone else. It is perhaps because of this practice that the ribald saying, “There are three sexes—men, women and the clergy,” originated.

Mythology is rich in legends. These legends are interesting. Men and women of today who are in high positions label the ancient mythologies as what they are—mythologies. These same men and women label their own mythologies of today as realities. Mythologies of the present day are so labeled by a precious few. A few centuries hence these mythologies will be correctly labeled. The Babylonian legend of the Descent of Ishtar sheds interesting light upon ancient eunuchism.

Indeed, the Descent of Ishtar is regarded by many as one of mankind's oldest stories. Ishtar was the goddess of love. This is tantamount to: The goddess of sexual activity. Ishtar descended *below*—that is to say—into the hollowness of the earth. In her descent she passed through numerous doors, giving up a garment at each door. She was originally depicted as wearing and dancing with seven veils. After passing through the last door we can well imagine her nakedness. She was thus lost from sight and there followed a period on earth when there was neither love nor loving. There were no sexual relations between men and women. It is even written in the legend that: “The bull did not approach the cow.” Even man of antiquity howled when his sources of supply were taken from him.

The gods held a council. There were many gods in those ancient days. The number seems to have been greatly reduced and seems rather aptly expressed in that saying of Thomas Jefferson: “The incomprehensible jargon of trinitarian arithmetic that three is one and one *are* three.” The council admitted that life was fast disappearing from the face of the earth and that something must be done. Ishtar must be brought back to the face of the earth. But *who* could bring her back? Could a female of the species be trusted to do this? Would a female be powerful enough to withstand the hardships of the journey? Could one or more females even succeed? And after all, should a female be sent on such a mission? Would this not be an affront to the goddess—herself, quite naturally a female?

Would it be proper conduct to send a virile male? What of the demeanor of these two—the beautiful goddess, and a virile male, especially with the goddess in the nude, on the return journey? No. This would never do. And so, they castrated a male—created the eunuch. The eunuch, as a messenger and guide, descended into the hollow of the earth, and, unperturbed by the charms of the beautiful goddess in

the nude—the great mother of sexual passion—led her back to the light of the earth's surface, to restore eroticism and reproduction to humanity.

Quite naturally we regard the legend with amusement and we are perfectly assured within ourselves that no goddess ever descended into the "hollow" of the earth. At some time in history it was inevitable that some reason must be given for this particular kind of man's inhumanity to man.

As we move along the historical scale into biblical history we find that the making of eunuchs was quite popular—even with the holy men of the Bible.

During the days of unbridled savagery when biblical history was in the making it was the practice or custom of victors in war to bring home, as trophies, the sexual organs of the defeated enemy. History presupposes some sort of civilization back in those days when God condescended to appear in person on earth and to talk with the creature called mere man. But the savage custom of cutting away the sexual organs of the defeated enemy and displaying these severed organs as trophies of victory was less humane than the practice among the aboriginal Americans of using the scalps of the vanquished in the same manner and history does not credit the average American Indian with having been civilized when discovered by Columbus. Even today the American Indian is regarded as having been without civilization in the 15th century regardless of the actual historical knowledge of the high state of civilization attained by the Incas, Aztecs, and others, ages before the time of Columbus.

Old King David, called a holy man of God, broke into biblical lore as a great victor when he carried home, to one of his brides, and at her request, the severed sexual organs of an enemy. David, Solomon, et al., the et al. including the leading men of Bible times, had created for themselves many eunuchs so that these eunuchs might be trusted to attend the harems of the mighty men of holy days. It was supposed that the eunuchs were sexless creatures and incapable of treading with heavy foot upon the virgin soils and spoils of their masters. But eunuchs were, and often are, capable of having sexual intercourse.

Some of the Chinese and other Oriental men of wealth, owners of eunuchs and harems, did discover, in time, that their wives and eunuchs were not to be trusted too far. They discovered that the eunuchs were having intercourse with the many wives of their masters entrusted to their supposed sexless care. They promptly invented a remedy. They caused the penises of the eunuchs to be amputated. The operation of choice (not the choice of the eunuchs, you may rest assured) was the cautery. A red hot or white hot iron or knife was used for severing the male organ against "the belly."

One passage in the Bible is spoken of by G. Mason Williams, writing in the magazine *Sexology* (New York), as being avowedly difficult to understand. Doubtless Williams (who does some good writing) failed to remember that the passage could be regarded as just another of the common biblical incongruities. The passage referred to by Author Williams reads: "There are those who are eunuchs from their mother's womb, and there are those who made themselves eunuchs for the sake of the kingdom of heaven." Williams explained that many religious thinkers, brooding on this, mutilated themselves as did the famous scholar Origen.

It seems strange that the mind of a scientific writer should almost completely miss the significant point. The eunuch being a man whose testicles have been removed, could not be a eunuch from his mother's womb. The biblical writers were ignorant of the condition known as cryptorchidism—the condition in which the testicles fail to descend but are retained either in the inguinal canal or in the abdomen.

When it is considered that eunuchs (castrated men) have been the husbands of healthy and passionate women, it is not surprising that the wife of Potiphar, chief of the eunuchs of Pharaoh, sought to seduce Joseph. If pictures are to be given even fanciful credence, both Potiphar's wife and Joseph were healthy, well-sexed persons. Joseph (not a eunuch), so the story goes, landed in prison because he refused to be seduced by the sexually competent wife of the chief of eunuchs. Is it to be marvelled at that someone originated the saying: "Hell hath no fury like a woman scorned"?

The spread of eunuchism was from Babylon and Egypt to the Roman Empire and all of the great kingdoms of the East. The Emperor Domitian is credited with having issued an imperial edict prohibiting the practice of castration. History records that the favorite youth of Domitian was Earinus—a eunuch.

Even after the Domitian edict the practice of castration continued to be profitable to some and the edict was disregarded. James Hunecker, a 20th century music critic, brought to the attention of Pope Pius X the fact that the beautiful soprano voices of eunuchs could still be heard in Rome. There were, of course, open denunciations of the practice of creating eunuchs, made by the church.

A great many of Italy's famous singers have been of the *evirati* or *castrati*, terms used by the musicians to describe the singing eunuchs. When castrated before puberty boys usually retain their boyhood voices and these voices are described by some writers as being of "great sweetness."

Such was the ambition of one Italian father that he is reputed to have castrated his own son on behalf of his aspirations for a musical career for his son.

Now and then, cryptorchidism (previously mentioned), not being recognized, played fateful tricks upon the high and mighty. There is a story told of an Egyptian pasha who was alarmed to find that his wives were bearing colored babies. The pasha's chief eunuch was a Negro. He had been castrated in childhood when but one testicle had descended. The other testicle later descended and the "eunuch" attained fatherhood.

History is not merely sprinkled, but is generously baptized, with periods of infamy. During one such period, when some of the world's well known religions were in the prime of their glory, Africa furnished millions of slaves to the world. It is a matter of history that the little African boys were more highly valued as slaves if they had been mutilated—made into eunuchs.

Castration is today a simple, though delicate, operation. Mortality, when it occurs, is usually due to other factors than the requisite surgery. In darker ages the mortality was high but men and boys were expendable—and cheap. The China of centuries ago furnished many boys who were made into eunuchs and, hence, slaves.

The Hebrew religion of historical times declared it worthy of death to castrate one of the lower animals. The creation of eunuchs was prohibited. There were, however, according to the Bible, eunuchs in the palaces of Israel's kings.

Tarses, no more than two centuries ago, became king of Persia. He was a eunuch. Tarses made himself one of the famous generals of history.

Oriental monarchy has followed closely the Persian pattern. Masterful Orientals have become powerful generals and have thus made of themselves rulers. As rulers they have had harems and into the harems their male and female descendants have been born. The males among these descendants, attended by eunuchs and women, have grown into effeminacy. These effeminates have not pursued courses analogous to the courses pursued by their illustrious fathers. Because of this govern-

mental administration has fallen largely into the hands of eunuchs. These eunuchs have contrived to overthrow their "kings" and many of them made themselves into kings.

When the revolutionists overthrew Abdul-Hamid of Turkey, among the first of their post-revolution acts was to hang, publicly, Abdul-Hamid's chief eunuch.

Eunuchs, even though neither hes or shes, and even though they were for centuries enslaved, have enjoyed a juicy slice of the world's riches. As the creation of eunuchs has become less profitable, however, it has become less popular. As a legal procedure, the creation of eunuchs is not widely practiced today, although, as little as one might believe it, castration, under certain conditions, is carried out at the direction of a court in the State of California, today.

To *Sexology* (whose publisher, at 25 W. Broadway, New York City, has granted permission to reproduce it) belongs credit for the following:

THE MALE EUNUCH

The eunuchs of history have been divided by Dr. A. P. Cawadias (as reported in a recent issue of Proceedings Royal Society of Medicine, London) into five classes: (1) those who were employed by ancient Eastern and other peoples as special slaves or servants; (2) the religious eunuchs, who represented a form of mystical madness causing priests and followers of certain ancient Eastern religions to castrate themselves so as to devote the whole of their services to their divinities; (3) the singer eunuchs—those who were castrated in order to keep a sweet infantile feminine soprano voice, which was much sought after; (4) the eunuchs who were victims of criminal assault, and finally, (5) those who were castrated for medical reasons or to better the qualities of the man.

The history of these types of eunuchs as described by Dr. Cawadias is fascinating. Religious castration, he says, was renewed in the middle of the 18th century by a sect originating in Russia and spreading into Roumania, known as *Skoptzy*. Its eunuchs were the first to undergo complete medical examination.

Herodotus told a story of a eunuch who became a Persian royal governor. On becoming governor the eunuch caused the arrest of the slave trader who, when the governor was a boy, sold him as a slave after causing his castration. The governor, using his particular methods of persuasion which included, it is unnecessary to guess, torture, caused the slave trader to castrate his own sons. This accomplished, the sons were compelled to castrate their father.

The Persian governor, it appears, accomplished both vengeance and the prevention of further reproduction in the slave trader's family.

It has been stated that castration, under certain conditions, is carried out as a legal procedure, in California. Some nine years ago Judge Frank P. Collier, then on the bench in Los Angeles, was transferred to the Pasadena area. Several well known and reputedly wealthy businessmen had become involved in sex crimes against small girls.

Judge Collier had been engaged in a vast amount of private research into the rehabilitation of sex criminals. Until well known and wealthy men became publicly involved it had apparently been of no concern in the Pasadena area, as to what happened to sex criminals.

California laws provide heavy penalties for sex offenders. Indeed, under certain laws, persons convicted of certain sex offenses may be confined in the state penitentiary for life. Probation may be granted by the sentencing court.

It has long been proverbial that all laws (in all states) have loopholes which exceptionally shrewd (and sometimes prosaically dull) lawyers may find for use to the advantage of their clients. Through these loopholes guilty persons may be freed. These loopholes often provided a hangman's noose for the innocent.

In order to execute a plan he had formulated through his research, Judge Collier was compelled to seek a legal loophole. California laws did not provide for the castration of sex offenders, either as a means of punishment or as a method of rehabilitating these offenders.

California law stipulates that a judge may require that certain conditions (which he is empowered to name) must be met in order that probation be granted. This was the Collier loophole. He offered sex offenders the choice of spending the remainder of their natural lives in prison, or of *voluntarily* submitting to castration. Thus, castration with legal sanction became, to all intents and purposes, legal in California.

There are those who believe that what is now known as "Collier's Choice" is successful. Doubtless it all depends on what one conceives success to be. It certainly succeeds in getting a fair number of men made into eunuchs. As to this, however, it would be possible to run into page after page of discussion. Such is outside the scope of this book.

As a measure for the preservation of life or health, or of health and life, castration is regarded, under medical jurisprudence, to be legal anywhere.

III. WOMEN AND CASTRATION

A Feminine Fad

Undeniably, castration of the female of the human species sometimes becomes necessary. It is likewise undeniable that many women, having little idea of the end results and desiring to be certain of avoiding pregnancy, seek to have themselves castrated.

Castration of woman consists in removing the ovaries. The ovaries in woman, like the testicles in man, are known as gonads. The gonads are known as the sex glands.

Woman rarely resists the surgeon who has no especial scruples against sacrificing her ovaries. It would be difficult to prove (or disprove for that matter), but numerous surgeons will more willingly castrate a woman than give her appropriate, birth control information and provide birth control measures.

Having the ovaries removed has become a fad with women.

There are many reasons for this condition and these reasons are for the greater part psychological. In numerous instances they are grounded in fear. So-called frigidity accounts for willingness to have castration performed in no small number of cases. Prudish and often cruel religious training in early life adds its number to the account.

The ovaries are placed within the body and when removed woman is not constantly reminded of their loss as man is reminded of the loss of the testicles. Body changes in the castrated female are less readily recognizable than body changes which sometimes manifest in the castrated male.

The practice of surgically removing the ovaries was by no means extensive until comparatively recent years. It is necessary to open the abdomen in order to remove the ovaries. Opening the belly is always more dangerous than slitting the scrotum. This is true even with the vast advances that we now recognize in surgery and this includes anti-septic surgery as well as much greater skill than was general at the turn of the present century.

The more recent advent of ovariectomy (female castration) leaves the female in a position of freedom as against centuries of enslavement of male castrates.

As will be seen later, the effects of female castration leave much to

be desired. Comparatively modern woman was disposed to follow fads. Modern woman is far too readily persuaded to keep in line with faddism. Polygamy among the Mormons was made possible partly because of the inclination of the female of the last century to follow the faddists.

These things are not spoken to the discredit of woman. Pronounced faddism, when it exists in individual cases, labels itself and "renders unto Caesar that which is Caesar's."

Greater feminine freedom and greater knowledge, both of which appear to be on the eve of realization, promise to bring a trend which will free woman from needless sacrificial surgery. This apparent eve has not come too soon.

IV. DESIRE FOR SURGICAL SEX TRANSMUTATION

An Insane Fancy of Near Males

If woman has her weakness for following fads, men, who may more appropriately be labeled near-males, have a weakness in desiring to be (or to become) women. Authenticated data will be cited in illustration of this. Meanwhile, because few readers may be found with present or previous knowledge of this, that which may appear to be a pronounced digression should enable all to better understand.

That any person would seek to have a surgeon remove a perfectly good eye, arm, or leg seems incredible. Persons have sought, and are seeking, far more drastic surgery. The surgical removal of the vermiform appendix, because it may, in time, give trouble, sounds like right good sense. It isn't. In fact, it is illogical, and within reasonable limits is insanity.

Perfectly healthy tonsils have been sacrificed without thought. Certain it is that one can live without tonsils and it is said that one hardly misses them. Life does not stop if the gonads, the sex glands, are surgically removed. It can hardly be said that one does not miss these glands—once they have been garnered by the scalpel. Indeed, when the male of the human species loses the gonads, through accident or surgery, the manifestation of the loss is ever apparent. Man misses gonads thus lost more than he would miss a leg or an eye. Of course, it is somewhat different with woman. Her gonads are not visible (except when exposed through surgery), and if she loses them she senses the loss consciously—or perhaps it would be better to say psychologically—as she would miss, for example, the tonsils or the appendix.

There are those who contend that Nature commits no indiscretions—makes no errors. Were this true there would be no idiots, no imbeciles, no morons. Likewise there would be no deformities and men and women, as well as the lower animals, would be creatures of perfection—physically and mentally.

If Nature may be said to create the beautiful camelia and the lovely orchid, then Nature may be said to create that horrid appearing human monstrosity, the phocomelus.

It has been held by men of wisdom of all ages that Nature is without intent—good or bad—and that all of her workings are through, by, and according to immutable law. Every evolutionary process studied by mankind indicates that one unchanging and unchangeable law of Nature is the constant process of building up and tearing down. In this process there is invariably gain. The human body begins as a single cell. As it builds to uncountable millions of cells, used up and worn out cells are discarded—yet, there is always gain—until we reach the last decline.

Destroy the process of reproduction—even of single cells—and the

world will become inert. It is because of this immutable law of reproduction that, long before he knew that it produced young, mankind indulged in the act of sexual intercourse. It is because of this same rule—which has its basis in immutable law—that man and woman, in equal manner, if not degree, have libido (sexual urge), and pursue this urge, not knowing whether they are fertile or sterile.

It has been said quite often that we rarely know ourselves. It can always be said with greater veracity that we never know our neighbors. Beyond a doubt we can never know ourselves too well. Our ordinary knowledge of our neighbors is sufficient for all practical purposes. As you read the following paragraphs the truth of this will dawn upon you.

Should someone tell you that your next door neighbor, a hard-working man by day, discarded his rough work clothing upon reaching home at night, bathed, shaved closely, and donned feminine make-up and finery for his evening's relaxation, you might be both startled and surprised. This, doubtless, is untrue of your neighbor—but there are many men who indulge in this apparent frivolity. Such a practice represents a mental twist. The mental twist may be prompted by faulty early training, or it may be because of an inherent mental weakness or a protest against conforming to the practices of the herd, or, and this is most probable, there may be glandular pathology or simple glandular imbalance.

Suppose you should learn that a man of your acquaintance had sought, or was seeking, surgery which would transmute him into a woman—change his sex from that of a male to that of the female? Throughout the length and breadth of the land there are untold numbers of men who would give fortunes, if they possessed them, could the surgeon's skill transmute them into members of the female sex.

There are men and women in countless numbers who are willing to pay heavy fees to have their sexuality destroyed. That women succeed far more often than men in accomplishing this is rather generally known. Almost everyone, male or female, can name quite a few women of his acquaintance who have had their "female organs" removed. The growing number of women thus practically desexed is appalling.

These women do not seek to have themselves made into males. They are prompted by reasons differing greatly from the reasons of males who desire to become females.

Women who have themselves desexed (with the exception of the sex center in the brain and the natural sexuality of their endocrine glands) do so more often than not because of fear of pregnancy or because of fear of too many pregnancies. Surgeons invariably find justification in some mildly pathological condition of the sexual system. Fewer surgeons than one might imagine are willing to sacrifice the sexuality of their female patients. One school of thought among eugenically minded surgeons has the conviction that the human race of the future will be bettered if the sexuality of women whose mentality is so weak that destruction of sexuality is sought, is destroyed. Sterilization—sexual sterilization—however, would accomplish this. Far too many women are not satisfied with mere sterilization, however, and if one surgeon will not perform a totally mutilating operation, another will be found, in time, who will. Women not infrequently commit acts leading to the apparent and often urgent necessity for complete sexual mutilation.

The distortions of the mind of the male leading to a desire for castration or sex destruction are many and varied. It is normal that in early childhood the female child invariably has a desire, often vague, sometimes pronounced, to be a boy. Seeing the visible penis of the boy, she feels that she should have a similar visible organ. Normally this childish fancy disappears and does no harm.

The small boy, admiring his mother far too greatly, wants to be

like her. Normally the boy outgrows this fancy. Even when a fond mother over-indulges her son, if he is of good sound sexuality and desirable hereditary antecedents, he will develop into normal masculinity—physically and mentally. The over-pampered boy with a weak glandular system and a poor hereditary background is a potential psychopath. Maternal pampering prevents him from outgrowing this potentiality. Many such male children grow up to be entirely harmless. They are often equally worthless to the human race. Some of these boys develop great and remarkable talent as they mature—or appear to mature. They may be regarded as thoroughly masculine by male and female associates alike. Ever within them, however, burns an unchanging desire to change or destroy their inherited sex.

Many of these sexually weak children fail to reach useful and acceptable maturity. Early in life many of these become guilty of what the law chooses to call criminal sex acts. Some of them become invertshomosexuals. One of the reasons why this is true is that they want to be, and to make themselves, as feminine as possible. In directing their sexual desires toward members of the male sex they feel that they are accomplishing a notable step toward femininity.

Males with such distorted mentalities and consequent distorted personalities have sought surgery by which they hoped to attain sex transmutation and become women.

Surgical transmutation was theoretically accomplished in the Einar Wegener case. Wegener was a Danish artist. Early in life he became a successful female impersonator. His biographer, Niels Hoyer, stated that surgery disclosed two distinct sets of gonads—one set being male—the other set being female. Wegener underwent surgery after he was past 40. Castration was performed as the first surgical step. The next step was amputation of the penis. Successive steps created an artificial vagina. It was when Wegener returned to the Women's Clinic in Dresden (Germany) apparently for an operation through which he hoped a womb could be created, that he died.

A less well known case occurred in Germany and was reported by Dr. Magnus Hirshfield. The surgery was apparently successful.

Several months ago the author, as staff physician for *Sexology* (New York), received a letter which shows definitely the trend of some male minds. Because the letter and the reply serve well as illustrations, they are given, exactly as published in *Sexology*:

Is it possible for a man of mature age to have his reproductive organs taken out by an operation to make it possible to have sexual intercourse with another male? If so, where can I get it done?

The reason I want to know is that I have no sexual desire for women, but there is a certain man I care for and I want to change my sex for him.

—Mr. L. R., Alabama.

Answer: The operation concerning which you ask is possible. Surgical procedures can remove the male organs and create an artificial vagina—but this will not—if the patient survives—cause a change from manhood to womanhood.

It is apparently true that Nature has created female minds and bodies and endowed them with male sexual organs. Likewise she has apparently created male minds and bodies and endowed them with female sexual organs.

The operation concerning which you ask was performed in one particularly famous European case. For a brief period the operation seemed to have worked out quite successfully—but another operation became necessary and the patient failed to survive.

Because of the doubtful success of such an operation most surgeons would probably be unwilling to perform it.

Suppose you should succeed in getting the operation performed. The results might not be all that had been desired. The physiology of your body might not respond. You would doubtless undergo personality changes involving a changed psychological outlook. And you might have no sexual desire. Furthermore, there is always the element of changeability in humans. The man for whom you would have gone to all of the trouble might no longer care. Men, you must realize, even transfer their affection from highly desirable women to apparently less desirable ones. Can you imagine the disappointment under such circumstances?

Unfortunately homosexuals are not assisted by law, society and even the medical profession, in solving their sexual problems as are the purely masculine and the purely feminine of the human species. They must grope in the dark. Yet, they are not nearly as much alone in this as you may think. Many husbands and wives suffer through life knowing that they have problems, and yet knowing no more than homosexuals as to how to solve these problems. Even in this enlightened age, sex is a subject that is taboo in most schools. Surgical operations to aid in the attempt to change from one sex to another *cannot be reversed*. If your male organs were removed you might later wish you had them back.

Why not try to preserve the sex to which you apparently belong? The male hormone testosterone might serve to change your views—to give you masculine virility and awaken in you a desire for women—even for a family of children, and fatherhood might become possible. If this should prove true your outlook would be changed and you would be a happy man. Any physician can prescribe testosterone for you and you can well be advised and instructed by your physician. A psychiatrist might help you to experience an outlook more promising in the matter of happiness than your present outlook. After a few months of such treatment, if you failed to find yourself a changed and a much happier man—through your physician you might seek surgical aid.

Following the publication of the letter quoted innumerable requests were received for further information. An almost unbelievable number of apparent males expressed a desire for surgical sex transmutation.

It is to be observed that hardly more than *mechanical*, although apparently physical, transmutation can be accomplished.

Through surgery the brain of the female beetle has been transplanted to the male beetle and vice versa. The beetles responded sexually according to the brain rather than according to their physical sexuality. So far surgeons have not been able to transmute the sex center in the human from that of one sex to that of another.

It is to be remembered that regardless of the disorder, it may be easier to change the psychological outlook of sick persons than to change their physique to conform to what a distorted mind may believe it desires. In numerous instances much can be accomplished in body change when but little can be accomplished in affecting a change in the psychology of an individual.

Numerous apparent females are, by reason of glandular and mental conditions, and especially body chemistry (hormonal constitution), more masculine than feminine. The same is true of apparent males. Males seeking to be transmuted into females are rarer than "near-men."

Many persons are of doubtful sexuality and it is to be borne in mind that the sexologist and the biologist have entirely different ways of distinguishing sex.

The biologist distinguishes sex from external appearances such as the deep voice, the beard, the body contours and the external genital organs of the male. The lack of beard, the characteristic female or

feminine voice, the body contours, the breasts and the external genital organs of the female guide the biologist in determining the sex of the female.

The sexologist distinguishes sex solely by the gonads. Testicles establish the sex as male. Ovaries establish the sex as female. The hermaphrodite is judged by those characters distinctly hermaphroditic. The most outstanding of these characters, from the viewpoint of the sexologist, is the ovotestis. This is a gonad which is part ovary and part testicle.

Virile males do not readily give up their gonads. Males and apparent males who have been referred to frequently by medical writers as "near-men" often seek to rid themselves of their gonads.

It will be shown later that whenever the sex characters are basically strong, medical science can do much for both near-men and near-women.

V. AN ANCIENT BIBLICAL PRACTICE

Castration As an Act of War

Although biblical eunuchs have been mentioned, it would seem appropriate to explain castration as an act of war in biblical times.

It would not be difficult to quote passages of scripture relative to eunuchs and the practice of castration during biblical times.

The following strange reading will be found in verses 11 and 12 of the 25th chapter of Deuteronomy:

When men strive together, one with another, and the wife of the one draweth near for to deliver her husband out of the hand of him that smiteth him, and putteth forth her hand and taketh him by the secrets: Thou shalt cut off her hand, thine eye shall not pity her.

A man who is a scholar and scientist, and who has been a successful editor and publisher for nearly 40 years, Mr. Hugo Gernsback, editor of *Radio-Craft* (New York), has given the following explanation of the passage of scripture quoted:

To understand the passage it should be noted that strive means war. In the biblical passage it is made clear that a faithless wife is trying to injure or castrate her husband, while he is fighting an adversary (who is getting the better of the fight) shall have her hand cut off.

Why should a woman wish to mutilate her own husband? Remember that in biblical times, people were still quite savage. A passionate woman seeing her elderly husband was doomed in combat with a younger, handsomer and stronger man, never hesitated to help kill her own man to gain a new one.

In biblical days women went with their men to the fields of war and fought side by side with them. It was the practice of women, by using a sharp knife, to castrate as many of the enemy as possible. It may be observed that in numerous instances the rule of the enemy was applied to a woman's own husband. If then, the woman managed to remain in the camp of the enemy she did not suffer the loss of her hand. If she was taken to her own camp after an attempt (whether or not successful) to mutilate her own husband or a member of her tribe, "her hand was cut off. The eye did not pity her."

Even to the present, history records that men have continued to mutilate men—to castrate or completely remove the sexual organs of enemies—in war. Whether the practice arises from the ancient savage

customs or as a result of biblical teaching, or both, is a matter for individual conjecture or opinion.

Laws, whether biblical or otherwise, and rules of war, are impotent to remedy sick minds—minds that continue to foster man's inhumanity to man. The remedy lies at the door of medicine—of geneticists, eugenicists and educators. At these doors it must lie until legislators are required to pass rigid tests as to their qualifications to "make laws," and until the leprous hands of thin-brained censors are forever purged from the affairs of mankind.

VI. THE CASTRATION COMPLEX

A Mental Disorder

The castration complex may be observed as frequently in persons of healthy physical sexuality as in persons endowed with defective physical sexuality. Dr. Sigmund Freud elaborated upon the idea of injury to the genitalia arising most often from a parental threat of injury as punishment. It was the Freudian theory that later fears of injury may reappear as symptoms of neurosis.

The world is indebted to Dr. Freud for having broken down barriers and debunked the priestcrafters by exposing man's innermost being, the deepest or greatest depth of the *unconscious*. Freud's indisputable disclosures revealed mind as mind in all its intricacies, shed light where there had been darkness and revealed not a shadow of an immortal soul.

To various subtleties Dr. Freud paid little heed. This is seen in the fact that Freud either did not specifically recognize or did not pay especial attention to the fact that the castration complex often grows with the growing child and often becomes fully as effective as actual physical castration. This becomes apparent more often in the male sex but occurs more often, perhaps, in the female sex.

That this is true is not difficult to understand. A powerful male castration complex causes impotency. The male is not capable of sexual intercourse—the act of reproduction. He is incapable of erecting the male organ and maintaining erectility to the end that he may procreate. The female, on the other hand, may take no interest whatsoever in the sexual act and yet be entirely capable of going through with it and becoming pregnant. Hence, the female with a fixed castration complex is not capable, as is the male, of avoiding reproduction — except, of course, through such inclinations as to refuse to permit the sexual act. There are exceptions, the most important of these being a condition in the female known as vaginismus. In vaginismus the vagina is in a state of spasm and penetration by the male organ is impossible.

The most damaging castration complex appears to be that which is gradually instilled into the child from day to day. Rarely have psychoanalysts been able to "break" these cases. The victims usually draw themselves into a shrewdly prepared protective shell—and there they remain. Outwardly they often, in adult life, show manifestations of lasciviousness. This is a psychological covering. It keeps people from suspecting the limitations and incapacities of these victims and at the same time gives the victims a little ego expansion they could not readily experience otherwise.

Fathers are responsible to an extent for the development of the castration complex in both sons and daughters. Fathers make threats of what they will do if a son or daughter turns toward "unchastity." They make scary threats of "cutting off" the male organs of their sons. In so threatening, few fathers think anything more of the threats. To

them it is often a huge joke. They feel that they are merely teasing their sons. The teasing all too often has far reaching effects and leads to a misfit life—of little value to humanity.

As a rule fathers have the responsibility of making the living for the family and accumulating the family fortune. In doing this they are quite busy outside the family and to mothers is left the task of "rearing" the children. Thus it is that the children are deeply under the maternal influence day by day through the formative years.

It is almost unthinkable that a high percentage of mothers who give birth to two or more children of either sex have a secret fixation and hope that at least one boy and one girl will never marry—never leave them. This fixation is more often than not rooted so deeply into the unconscious that the mothers so affected seldom realize that they have the fixation. Many who do come to realize it begin an immediate fight to give it up. Others feel that it is their inalienable right and fight to retain and expand the fixation.

An untold number of bachelors of both sexes are bachelors because they have a castration complex so severe that they feel far less capable of marriage than if they had actually been physically castrated. This, of course, is not a sweeping statement to the effect that all bachelors of both sexes are victims of a castration complex. Old General Gomez ruled Venezuela for years and fathered dozens of children—yet he remained a bachelor. A courageous woman in Norway, being unmarried, gave birth to a child. She was a teacher and was promptly fired. She put up a fight and was restored to her position. She wanted a child but did not want to marry. This, it appears, was satisfactory to the man who fathered the child. The woman's fight is commendable. It was one for personal freedom. On the other hand—she wanted to raise this child so that mother and child would always be able to remember the times *they* had had together. Pity the child! Pity it first because it will be mother-dominated. Pity it again because as it begins the process of growing up, it will, like other children, want a father.

The courage manifested by the mother was commendable. The fight she made was commendable. Cheating and dominating the child—cheating it out of a father—making it goodness knows what—but whatever may suit the mother's fancy—these are to be condemned in the most condemnatory thoughts of which anyone is capable.

The mother—or as an eminent psychiatrist has lately said—the "mom"—of any child, has ways more subtle than the serpent, for bending her sprigs as she wants the tree to grow. Healthy influences often intervene—and the tree grows differently. Moms have a way from early in the life of certain of their children of "getting beneath the child's skin." First, they pet and pamper. They find it easy to give the child a chronic case of hypochondria. Just let the child have a slight spell of illness (and most children do) and the Mom begins at once by constantly reminding the child that it may become ill again—seriously. The child must remember its heart, its this or that. When it is advantageous to the Mom the child is certain to be a "delicate child." There are any number of labels. Other children must humor the Mom's *fix*. The child who is a *fix* has little chance to grow up normally.

When such a child reaches a certain maturity and feels the sexual—the procreative urge—and begins to cast about for a sweetheart, the Mom can always find something terrible about any favored girl or boy, to tell her *fix*. She doesn't always succeed in creating a mental castrate—but she succeeds all too often for the good of humanity. And Moms like this are all too common. In families of four or more children, Moms who establish fixes on at least one male child and one female child are so common as to be almost universal. The *fixes* do not always respond—not wholly—and the subtleties of the Moms fail. This is healthy for humanity. Unfortunately Moms succeed all too often.

When a *fix* resists with determination, one of the favorite weapons of the Mom is: "I never thought I'd live to raise a child who would talk to me like that. I never thought I'd live to raise a child that would disrespect and disobey me that way." It's insane psychology, but it works more often than those who have not made surveys and analyses ever dream. The same terms are rarely used on "other" children—regardless of what the conduct of the other children may be.

The principal cause of persons with a castration complex is, like the cause of all other real evils, ignorance. When ignorance is accompanied by selfishness—the evil gains in magnitude.

It has been explained previously that fathers have, by using the knife, or seeking its use, castrated their sons. Mental castration may be as severe and in many instances it is decidedly more severe.

The female mental castrate for reasons of economy marries more often than the male mental castrate. Because of her ability to respond by permitting her husband to satisfy himself sexually, she gets along in marriage—sometimes so well that no one suspects that there is anything amiss. Her husband regards her as merely a cold or frigid woman—and inasmuch as he has been told that frigid women are common—he is led to believe that he has done as well, perhaps, as the majority of other men—and better than men who have married wives so passionate as to keep their husbands forever jealous of them.

When the male mental castrate marries he may, if he is fortunate enough to marry a tactful woman, be quickly cured. If the reverse is true the marriage soon ends on the rocks—the mismatched people separate or get divorced. Rarely does marriage rehabilitate the female mental castrate. Sexual relations are forever anathema to her and she projects her insanity upon as many of her children as she possibly can.

One other form of figurative castrate merits mention. This is the "organ size" castrate. Far more than half of the men who take their problems to the sexologist for counsel and advice believe themselves to have external sexual organs so small as to bar marriage or success in marriage. These men believe in all of the superstitions about "developers." No amount of sane professional advice turns the majority of these away from their superstitions.

Numerous "developers" have been offered—and countless of these have been bought—even by men whose male organs were above the average in size. Some of these modalities are as harmless as they are ineffective. A great many of them do serious damage.

One type of "developer," working on a vacuum principle, has been widely sold. Notwithstanding the fact that numerous States have passed laws against these gadgets—some of them have even been prescribed by misled physicians.

The vacuum type developer usually congests the organ to the extent that the spaces in the spongiosum become broken down and the penis actually atrophies instead of increases in size. And there have been cases in which the congestion led to complications and gangrene, and amputation was necessary.

VII. THE ACTUAL EFFECTS OF CASTRATION ON BOTH SEXES

The Effects of Castration Before and After Puberty—

Cryptorchidism in the Male—Infantilism in the Female

Females castrated before puberty do not develop in body contour as do females not castrated. There is little (often no) growth of mammary gland tissue. In other words, the breasts do not develop but re-

main mere nipples. Pubic hair may not appear at all and if it does it is always scant. In rare cases there may be remarkable intellectual development. As a rule the female who is castrated before puberty remains a docile creature and manifests infantilism throughout her life.

The male who is castrated before puberty does not develop a deep voice and as has been mentioned his "sweet" soprano voice is often valued for its singing qualities. The beard fails to appear and there is rarely pubic or other body hair. The male who is castrated before puberty rarely develops any degree of aggressiveness. He may develop remarkable intellect, but even so he is invariably devoid of the ability to exercise mature judgment in matters of consequence.

Various textbooks devote chapters to each distinctive factor manifesting in males castrated before and after puberty. In a recent issue of the Proceedings of the Royal Society of London, Dr. A. P. Cawadias wrote:

In castration before puberty there is (1) tallness, abnormal length or thickness of the legs, underdevelopment of hair on the face and body, with good development of scalp hair, thinness. Obesity develops much later in some cases from reaction from the pituitary gland. (2) Inability of the male to perform sexual intercourse and lack of sexual craving, defective development of the external genitals, prostate and seminal vesicles. (3) Variable reaction of the mind. Usually a tendency to dwelling within one's self with childish traits and abnormalities due to an inferiority complex. Those castrated before puberty, however, often show normal functions of the mind and a capacity for action and achievement. (4) A lessening of the energy of the body and decreased excretion of male hormones in the urine.

Those castrated after puberty show: (1) No tallness, no excessive size of the legs, usually no underdevelopment of the hair, obesity of special girdle type setting in earlier. (2) Ability to perform the sexual act and sexual craving can be maintained. (3) Reactions of the mind are the same as in those castrated before puberty, but influenced by the personality of the patient and the environment. There is likewise a lessening of body energy and decreased male hormone production.

In general that which applies to the male castrate applies to the female castrate except, of course, references to beard and certain characteristics peculiar to the male. The emotions of the female are invariably more powerfully influenced than the emotions of the male.

In certain diseases of the endocrine glands both male and female may manifest infantilism. Infantilism in the female is made more noticeable because of a greater manifestation of mental symptoms.

Cryptorchidism in the male is a condition in which the testicles fail to descend into the scrotum. Descent sometimes occurs late. In the cryptorchid there is invariably aspermatogenesis. Coitus may be possible but sexual desire is rarely good. General symptoms are quite similar to the symptoms manifest in the male castrated before puberty. The cryptorchid is sterile.

Cryptorchids and physical castrates don't and can't reproduce. Whatever their faults they can't project them directly into heredity. As if in compensation, castrates, physical and mental of both sexes, and notably mental castrates, often become censors and reformers. The compensations of sexual power are not theirs to enjoy—and like religious celibates, they often undertake to legislate a pattern or a set of patterns for sexually normal people. The idea is as incongruous and confusing as it would be for an eighth grade pupil to undertake to direct a professor of calculus in reaching correct conclusions.

Sexual frustrates and sexual castrates (especially when the latter are of the mental type) are, to a large extent, on a par, mentally. Ac-

tually—in the majority of their actions—they are sincere in thinking themselves right. It is not within their power to realize that their dictates cannot apply, or be applied, to persons of normal sexuality and of normal mentality.

VIII. MEDICAL TREATMENT OF CASTRATES

It is to the credit of the medical profession that efforts are continuously in progress to find better and more effective means of treating the ills of mankind. Primitive man knew little or nothing about medicine and developed a strong constitution and a resistance beyond the wildest dreams of present civilization.

Sanitary science is constantly improving the lot of man. But with regard to sanitary science man builds no great dreams—no outlandish romantic legends. A sanitary method simply works or it doesn't. It fails to stir in the human breast of persons who have suffered misfortunes leading to defects of body and ability the hope which is stirred quickly to holocaust proportions by the whisper of some new and powerful drug with its promises and pseudo-promises.

A book called "The Male Hormone" was written by Paul de Kruif. An extract consisting of less than one ordinary printed page giving the important data on "Uses of the Male Sex Hormone," appeared as an editorial in *Sexology* (New York) for January, 1947. The editorial extract is from a recent paper by Dr. W. O. Thompson of the University of Illinois College of Medicine. It was read before an assembly of the American Medical Association at San Francisco. The editorial with its original title follows:

USES OF THE MALE SEX HORMONE

The important uses of the male sex hormone are the following: Testosterone is a potent therapeutic agent and its use is indicated chiefly in cases of primary hypogonadism (deficient secretion of the sex glands) in the male. Its most important uses are in the treatment of the following conditions: (1) eunuchism; (2) primary eunuchoidism; (3) two-sided abdominal undescended testes when there is no response to chorionic gonadotropin; (4) the Froelich syndrome associated with two-sided undescended testis; (5) pituitary dwarfism; (6) the male climacteric; (7) impotence from glandular causes; (8) Cushing's syndrome; (9) Addison's disease, and (10) hypopituitarism with secondary hypogonadism in old men.

A few years ago it was recommended that the male sex hormone be used in patients with mild enlargement of the prostate gland. Since the development of the prostate, in the first place, depends on the stimulation by the male sex hormone, it is not easy to see why the administration of this sex hormone would make the prostate smaller. It does not appear to be an especially helpful treatment. Some observers have suggested that it is effective not because it has any influence on the prostate but because it improves the tone of the smooth muscle of the bladder.

Improvement from male sex hormone treatment has been claimed in the following conditions: (1) angina pectoris (severe heart pain in the chest); (2) various menstrual disorders in the female including excessively profuse menstruation, hemorrhage from the womb and difficult or painful menstruation; (3) cancer of the ovaries, and (4) cancer of the breasts.

Dr. M. A. Lesser has recently reported definite improvement in about 50 percent of patients with angina pectoris as the result

of the administration of testosterone propionate (male sex hormone). It was noted that the improvement did not set in until six to eight weeks after the administration of the hormone was started. It was Dr. Lesser's impression that the life of patients with this condition was not prolonged, but that the improvement was the result of changes in the heart muscles.

The male sex hormone is of no value or its use is considered inadvisable in the following conditions: (1) sterility; (2) mild enlargement of the prostate gland; (3) cancer of the prostate; (4) defective development of the genital organs with one or more testicles in the scrotum; (5) undescended testicles unless there is no response or an inadequate response to the hormone which stimulates the testicles; (6) inability to perform the sexual act when such inability is not due to disordered glands, and (7) old age complicated with hardening of the arteries and high blood pressure heart disease.

In a few words it may be said that although testosterone stirred visions and dreams in the heart of man, so did "606" as a cure for syphilis stir dreams in the hearts of scientists. That drug doubtless served a useful purpose. Penicillin has the limelight now and medicine and pharmacological science go forward at their snail paces while physics and inventive science prepare to launch supersonic rocket planes. Medicine still puts too much faith in substances and not enough in bio-physical science.

The male hormone, testosterone, notwithstanding, is, when used with good judgment and nice discretion, a boon to mankind. The chief difficulty seems to be that altogether too much is expected of it.

The treatment of males castrated before puberty is chiefly hygienic, psychological, educational and sociological advantage. Implants of the pure testosterone, subcutaneously, may contribute to greater strength and a better sense of well being. The implants need not be repeated frequently.

The treatment of males castrated after puberty should include the measures mentioned for those castrated before puberty and may include generous and often frequent implants of the pure testosterone substance.

The treatment of female castrates before puberty should be much the same as that of male castrates in the same category, with the exception that testosterone is not indicated. So far there seems to be little evidence that estradiol (or the estrogenic substances) are of value. Pluriglandular therapy may benefit the general health in well selected cases.

Treatment of females castrated after puberty should be along the lines outlined for females castrated before puberty with the addition of female hormone treatment. Such treatment (hormone) is not always indicated.

Preparations such as testosterone when shipped in interstate commerce are required by federal law to bear words like the following: "Caution: To be dispensed by or on the prescription of a physician only."

Any attempt at self-treatment with hormone preparations is a foolish waste of money.

IX. PERSONOLOGY AND CASTRATES

Personology is the study of persons. The science of personology, therefore, treats of the study of individuals. That which has been written in previous chapters with relation to castrates of both sexes can apply only as general rules apply to any class of individuals. No set

formula—no set rule—can apply to persons except collectively or as a class. The individual must be studied as a person—treated as a distinct individual.

Persons, regardless of status, either respond to environment and circumstances, fail to respond, or create circumstances and an environment of their own. Castrated men have become holders of high office. Castrated women have carved careers for themselves in the arts and sciences. Successful castrates are exceptions rather than the rule.

Castrated men have been known to live for years in communities—keeping their secret—without suspicion. These men were, of course, castrated after puberty—after they had matured into manhood.

Castrated women are becoming so common today that no heed is given them with regard to their castration.

There is, on the personological plane, one distinct difference in men and women that the riddle-busters are unable to fully understand. A man who has given up his sexual organs invariably keeps quiet about it. He usually develops a complex and thinks that his misfortune is written all over him for the public to read. And, even thinking this, he remains secretive. The castrated woman (though not all castrated women) on the other hand, and especially the woman who has "had everything removed," goes about broadcasting her condition to almost anyone who will listen. An observant psychiatrist has remarked: "It's just the difference between men and women." It is, of course, more than that. It is the difference in persons. It is also, even though sex has been seriously altered, the difference in the sexes.

Persons convicted of sex crimes in Judge Collier's California court have naturally been persons of inferior sexuality (though often apparently precocious) and of mental defectiveness. Much has been claimed in the way of benefits from the rehabilitation of convicted persons who have submitted to castration rather than serve their lives behind prison walls. Letters expressing deep gratitude are said to have been written to Judge Collier from "rehabilitated" convicts. It may be well to avoid dogmatism in the matter and yet it seems that little, if anything, is accomplished for the good of humanity through castrating and *rehabilitating* the sex criminals dealt with by Judge Collier's court. It may be argued on the one hand that the castrated rehabilitates are not an expense to the State as would be the case were they imprisoned. In the total economy of a tax rich State, the additional expense of caring for persons convicted of sex crimes is insignificant. And as to the good these rehabilitated castrates may do society—it is highly controversial as to whether they are, or can be, of any value whatsoever to society.

Here, of course, we are brought face to face with personology in each case. And, again, with whether "sex crimes" were actually such per se, or whether such crimes were so labeled by persons of perverted ideas who were willing to label almost anything connected with sex as criminal. From this reasoning a further study may arise. Is it not possible that numerous persons convicted were in reality not guilty at all of the crimes of which they were accused? Innocent persons have been convicted. A person convicted of a crime and sent to prison may be liberated in the event evidence of false conviction arises. Innocent persons convicted of a crime and castrated because of conviction cannot have the castration operation reversed in the event innocence is subsequently established. Then—certain acts labeled as crimes by courts and legislators may not actually be crimes in the true sense of the word.

These explanations have been brought out because of the fact that laws, like rules or formulas previously mentioned, may be applied within limits to classes of individuals collectively, but the same laws may not be applicable to persons individually.

It is possible to stop an avowedly defective male or female from

reproducing without almost completely destroying the sexuality and seriously impairing the personality of either. This may be done by sterilization.

Innumerable rather intelligent persons confuse sterilization and castration. Not long ago a man, who has been a rural mail carrier almost long enough to have reached retirement in age and length of service, remarked to the author that: "Sterilization is the last thing a good man wants; no man with any sense wants to lose his testicles."

So far as has been learned to date (and there has been ample opportunity for qualified scientists to observe) sterilization of either sex does not damage the sex life—it merely prevents procreation. In this, of course, the study of persons must be given consideration. Sterilization may produce unfavorable psychic results upon persons—individuals. It has been observed so far that unfavorable psychic reactions to sterilization occurred because unfavorable psychic factors existed previously in the person or persons affected.

In his preface to "Modern Psychiatry" (The C. V. Mosby Co., 1945), Dr. William S. Sadler states:

In "Modern Psychiatry" I am endeavoring briefly to tell the story of *personology*—the difficulties human beings have in adjusting themselves to life. The word, *personology*, is not in the dictionary, but it should be. We have an "ology" for the mind, for the body, for social relations, for religion, and so on; but we have been so much interested during the past hundred years in dissecting and analyzing that we are only just getting around to realizing the importance of synthesis—of putting these things together and studying them as wholes.

In the same valuable work Dr. Sadler explains further, on page 2:

Outside institutions, psychiatry is really the practice of *personology*—the study and treatment of men and women as persons. For a quarter of a century Adolf Meyer has insisted that we deal with the "he" and the "she" in the practice of psychiatry. It is not enough to exclude the presence of organic disease by physical examinations and numerous laboratory tests. The diagnosis of personality disorders must rest upon an adequate history and must be derived from a proper study of the maladjusted or neurotic patient.

Under our system of jurisprudence, more political than legal, no study is made of *personology* in connection with persons accused of crime or crimes—sexual or otherwise. On the surface only law is considered—law and evidence, the latter being regarded as a component part, or adjunct, of law. And certainly little thought is given to the *personology* of judges, jurors and attorneys. If indeed even a little thought is given to jurors it is given by scheming attorneys as to whether a particular juror may be favorable to the prosecution of the defense—and not as to whether the juror will actually judge honestly and with human discretion.

The maladjusted person—and the castrate is fortunate indeed if he or she escapes this category—is judged by his fellows, not upon a basis of a study of himself or herself, but according to the prejudices of his fellows.

There is an approach to a key to "justice" as we know it and as it is administered, in the foregoing paragraph. A jury judges, all too often, not on the merits of a case and its evidence, but according to the juror's personal convictions, prejudices and politics.

One who gives a little thought to *personology* cannot read great thinkers of the past like, for instance, Voltaire, Aristotle and even Montaigne, without realizing that these thinkers frequently gave weighty consideration to the science of persons. Nor should Socrates be excluded

from this category. It would not be difficult to name others whose philosophical teachings have stood the test of time.

A psychologist, a second lieutenant in the army soon after the outbreak of hostilities in World War II, had been drawn into an argument relative to Atheism and religion. He was asked: "If you destroy religion as it is now known, what will you put in its place?" His answer was: "If I destroy a weed, I put a flower in its place or know that the space occupied by the weed will be as valuable or more valuable if nothing is put in its place. If one must call something a religion I know of nothing greater than humanology—the study of humans, and relations with fellow man based upon humanology and personology — the study of persons."

Applied personology can be of real value to persons unfortunate enough to be castrated whether castration is a result of a morbid mental condition, a necessity because of accident or disease—or a condition imposed by (benevolent?) justice.

X. CONCLUSION

Normality is an evasive entity. Educators, scientists and others are constantly endeavoring to establish "norms." Various norms become accepted—temporarily—at least. There are now so-called norms for the intellect, for determining human conduct, for gauging the personality, etc., ad infinitum. A norm may be accepted as having value because anything which may contribute to an eventual intelligent analysis may be regarded as having value.

That which is normal to or for one person may be far from normal when another person is considered. Except a biopsy be performed, the sex of many persons cannot be established in the early years of life. The author has shown this in detail in another book, "What Is a Hermaphrodite?", naturally, a Haldeman-Julius publication. It is impossible to establish a rule for normal sex conduct for a person whose sex is not known. So-called normal persons will find it difficult to establish rules of normal sex conduct for cryptorchids, or for members of the female sex whose genital systems remain infantile into and through adult life. Cryptorchids and females of infantile sexuality are incapable of understanding even an approach to normality in well-sexed individuals. Another problem arises in both males and females castrated before puberty and still another problem is that of persons of both sexes castrated after puberty.

The mental castrate, and a norm of conduct for such castrate, must be studied from a point of view entirely different from that applying to individuals who are healthy in body and mind.

At present little is known—and but little is guessed—as to means of preventing the cryptorchid because cryptorchidism is due to a developmental defect. It may be that in time supplying special substances to the pregnant woman will serve to prevent cryptorchidism in males and infantile sexuality in females.

Accidental and pathological castrates, doubtless, there will ever be. When, and if, castration can improve the human race, then legal castration may be justified.

Forced castration has no place in an intelligent society.

Ignorance is no excuse, yet, speaking paradoxically, it is the only shadow of an excuse for mental castration—the castration complex.

Many valuable books are not available to the general public. Much valuable information is withheld from the public. This is not because members of scientific professions will it so, but because of economic, and other factors. As yet the general public has not reached a point of

technical education which would permit of ready comprehension of numerous works of science circulated to members of the scientific professions only.

In books such as the present one historical facts and other valuable data are presented in such a non-technical manner that all who are capable of reading may understand. Books of this kind present no economic problem to persons interested in availing themselves of adding to their accomplishments through a University in Print.

Many books are available to the scientific professions only. The public is denied these books by a set of so-called humans who are worse social misfits than many persons confined in asylums for the insane. The name of this genus is *censor*.

The censor, often no more than a psychopathic misfit, seeks to tell you and you and you what you may read, what shows you may see—and almost what you may or may not think. Thoughts are governed to such a great extent by what we see and read.

Recently the censors banned a motion picture because the leading lady wore a costume which showed a faint line of cleavage at the upper margin of her breasts. Yet, the press in general, and that widely circulated weekly, *The Pathfinder*, gave considerable space to editorial comment and pulled no punches. Censors have never stopped mothers so inclined from hauling out ample breasts, sometimes with a pseudo-gesture at shielding, and feeding their babies wherever the babies voiced hunger. And why should not a mother feed her child by any accepted and feasible method when the nature of the infant causes it to cry for nourishment? Shall the showy eating places of the country be remodeled with an eye to bathroom seclusion?

This seeming digression has a purpose. The purpose is to direct attention toward various sources which serve, like the priestcraft of old (and even modern) times, to keep people in ignorance. Today you may be whole of body. Tomorrow you may lose an eye, an arm, a leg, your teeth, or your testicles, or your ovaries. You have no difficulty in learning how persons overcome, to an extent at least, the loss of an eye, an arm, a leg, or the teeth. But should you become a castrate—you will be fortunate that you chanced to find this book—a book giving but brief facts—yet notwithstanding, *facts*. You will have an insight which may help you to solve or find a solution—insofar as a solution is to be had.

Medical treatment of castrates is not as yet all that is hoped for by earnest medical scientists. A philosophy of helpfulness must be spread among members of the medical profession. Unfortunately for this profession and for the vast clientele of the profession, bias is as rife as it is among members of a jury.

Medicine, for centuries in the hands of the priesthood, made some great advances—backward. Even after medicine was taken out of the direct hands of the priesthood it remained for a long dark period under the dominance of the priesthood. Had not a daring queen of England permitted the administration of chloroform by her physician to ease the pains of childbirth, anesthesia might have remained unused until the present day. The priesthood—the clergy—cried down the use of anesthesia as the “work of the devil” until a “divine” queen, who could do no wrong, gave the lie to the devil and enjoyed a painless childbirth.

As rapidly as medical men free themselves of priestly biases, greater knowledge and greater blessings are becoming the property of every man, woman and child.

While various biases and mass ignorance remain with us we shall continue to see here and there our pitiful fellow creatures, the mental castrates—persons made afraid of marriage—afraid of sexual relations as a healthy procedure with the opposite sex by an ignorant mother and an equally ignorant and negligent father.

Through ignorance fathers and mothers give their children a cas-

tration complex. And such parents, fathers especially, have winked at friends and spoken of their sons: "He's not the man with the ladies his father was at the same age."

Other equally ignorant men have winked back with "I see what you mean."

The female castrated in middle life needs more help, perhaps, than any other castrated person. The male castrated in middle life is often compensated to a great extent through hormone production and by the powers inherent in the prostate gland. Man's emotions at this time are fairly stable. Woman's emotions are less stable. She is likely to suffer greater personality disturbances if she has had an unsatisfactory sex life. But a small number of women who experience satisfactory sex lives ever become castrates. One of the reasons is that their sexual systems remain healthier.

Various medical measures including material therapeutic agents may be made to be of value to males and females who suffer castration.

Thorough knowledge and assistance in developing the reasoning faculties can be invaluable in adjusting the personality to the end that the effects of castration in both the male and the female be, to as great and extent as possible, compensated.

NOTES AND COMMENTS

By E. Haldeman-Julius

Reprinted from The American Freeman, Published at Girard, Kansas.

SCIENTIFIC HUMANISM

I have just issued a booklet in which a professor of philosophy offers us "an 'ism that will end all 'isms." The title of it is "Scientific Humanism—Its Origins, Teachings, and Social Program," and the subtitle is "An Outline of the Philosophy that May Provide a Basis for the Integration of the World's Great Cultures." Professor Oliver L. Reiser, who teaches philosophy at the University of Pittsburgh, is a bold man. He presents a system of philosophy in a pamphlet, which no philosopher ever did before, he contrives to avoid metaphysics, and he proposes to swallow up all the 'isms that afflict us in one little 'ism that you can carry about in a coat-pocket or a handbag. However, we are all so sick of 'isms, especially the 'isms that promise to turn men into angels by fighting like devils, that we read the new plan carefully and sympathetically—and decided to publish it at 25c per copy.

A hundred years ago a group of French philosophers, headed by Victor Cousin, had the same idea of "integrating all knowledge." They called the system Syncretism, which was enough to kill the poor infant, and, what was worse, they integrated a lot of nonsense as well as sense in it. The 'isms went on fighting gloriously over the remains of Cousin's kindly-meant synthesis. Later in the century Professor Lotze made another effort to collect all that is good in all systems of knowledge, and he called the result Eclecticism, which was again like putting a milestone round the neck of a good intention. In this century the professors who felt that this idea of seeing the good or the true in all 'isms is the best way to disarm them settled upon the name Humanism. In the Middle Ages the word meant cultivating profane literature instead of sacred literature, which seemed to heat the blood too much. At the beginning of this century it was applied to what was at first in America called Pragmatism, or the claim that we do not and ought not to use logic and intellect alone in forming our opinions, and Professor John Dewey gave it a new and subtler meaning. Meantime, however, it was adopted by a group of men and women, mostly issuing from Ethical Culture circles, to denote that their aim was to devote themselves exclusively to the affairs, interests, and problems of man.

That we are all Humanists in this sense need not be stressed, and it is not our habit to quarrel about fine shades of difference. We roundly agree with what Dr. Reiser calls the scientific basis of his version of Humanism, which he thus formulates:

Science impresses upon us the process character of everything that exists or happens in our universe.

There are some things in this world we must accept as basic.

Not every problem has a solution.

We now realize the dependence of everything upon an environment.

No one knows all about everything.

But would there be any hope of enclosing all 'isms even in those rather

elastic formulas? The biggest 'ism in our world is Catholicism, and we need not anticipate what Father Fulton Sheen would say on the matter. The next biggest is Protestantism. . . . But we may take it that the author has no hope of bringing these into the fold. At the most he may suggest that they might cooperate on Humanist principles as far as they go, however much they may think of their particular supernaturalist principles. But there's the rub. They consider that their supernaturalism is the essential cure for human ills and will cooperate on no other basis.

Is there any hope of uniting at least all non-supernaturalist isms? To be practical, is it advisable to drop all such isms and call ourselves simply Humanists? In the first place we feel sure you will never get the rival political and economic 'isms to entertain such a proposal. Dr. Reiser approvingly quotes Lancelot Hogben saying, in defining his Scientific Humanism, that its first aim is "a realistic survey of how modern social institutions contribute to or militate against the use of such resources for the satisfaction of fundamental human needs." We should dearly love to see the Individualist lions and the Communist lambs cooperating in a dispassionate realistic study of the Private Enterprise system and the Gosplan system. The millennium would be not far off. But is it likely? Could you ever get Freethinkers, Agnostics, etc., to tear up their labels and form one big happy family? Dr. Reiser may not know why not. And if they did so, the Ethical Culture folk and the existing Humanists would not join them because they themselves condemn attacks on religion, to say nothing of the fact that they do not want the question of the basis of moral law itself investigated too closely.

A scientific Humanist, Julian Huxley, is actually at the head of U.N.E.S.C.O. There does not seem to be any hope of getting more unity than that organization, much as we dread the influence of politicians and the churches on it. To many of us it seems that one of the great needs of the world is to eliminate the belief in the supernatural. It is the life-blood of rich and powerful clerical organizations which do interfere constantly and mischievously in our human affairs. It distracts the race perniciously with a dual standard of conduct. It bullies the press and the libraries and closes down on truth. It dominates educational and political life in America. And for this fight most of us prefer the uncompromising description Atheist. To be sure it is negative. That is why we chose it. There is a monstrous lot in life that we have to deny and defy. Beyond that we have our 'isms for the various problems of life. Our general contribution to their solution is a critical attitude, an active mind, a fearless study of all realities, a mighty faith in the future of man. But the idea of blending these 'isms seems impracticable. Man advances a step when the true 'ism destroys the false.



PROPPING UP THE BIBLE

If the mind of America were correctly reflected in its general press we should say that it is getting sloppier and sloppier. We have given many illustrations. Another is the way in which proof of the truth of tall stories in the Old Testament is now constantly announced as provided by archeological discoveries. Some years ago most papers announced that the story that the Jewish priests blew down the walls of Jericho (probably, as walls then were, eight to 12 feet thick) with tin trumpets, was true because the foundations of the walls, with every sign of earthquake, had been discovered. Next, we got a claim, never made good, that inscriptions in the Hebrew language about 4,000 years old had been found. Then Father Abraham was vindicated because there really was a city of Ur 4,000 years ago: which nobody ever disputed. During the war there was a perfect orgy of pictures of the Holy Places, which were long ago exposed as fraudulent rackets, and the Dead Sea, the Rock of Horeb,

the summit of Sinai, etc. This year the two gems are the discovery on the summit of a mountain of the remains of Noah's floating Zoo (an old story dished up by one of those arch-liars, the White Russians) and a claim that remains discovered at Ur confirm the longevity of Adam (930), Methusaleh (969), and all the other boys of the old brigade. The cream of the joke in the latter case is that the authority quoted is Sir Arthur Keith, an Agnostic who no more believes the Bible stories than Grimm's fairy tales. At this rate American churches will soon be exhibiting treasures like those of medieval Europe: the umbilical cord and milk teeth of the child Jesus, his pram, Mary's nightdress, Joseph's saw, one of John the Baptist's heads, the very gridiron on which Laurence was roasted, and perhaps one of those wonderful hairs of the head of St. Agnes. Can't our leading journalists do something for the dignity and decency of the press?



CATHOLICS AND DIVORCE

It is one of the resounding boasts of the Catholic body that their church, and their church alone, guards the integrity of that "foundation of the state," the family, by condemning divorce. The magic of words! You have only to breathe the word foundation and you at once imagine the state as a vertical structure, like a skyscraper or a civic hall, resting on a solid basis which must be protected from any sort of rot. This basis is composed of religion, democracy, freedom, the American tradition, and the family; and our Catholics, who support in comfort and bow down to an immense army of priests who have no visible families and claim that their refusal to marry wives and breed children makes them immensely superior to anybody else, say that the family is the chief foundation-stone. It is a pathetic example of the way in which millions of folk allow themselves to be hypnotized. Not only is it the modern view that the only things that can be called foundations of a state are the will of the majority of its citizens and the peaceful industry of all, but these folk are blind to the flagrant contradiction in which they wrap themselves. America, they say, and with considerable truth, is the most solid, most powerful, most comfortable state in the world; yet it is, taking one state with another, the country in which divorce is easiest and most frequent. Perhaps they will next suggest that the only two grave perils that threaten its solidity and prosperity, the recurrence of depressions and wars, are due to the facilities it grants for divorce in most states, or that the states that (like South Carolina) are the strictest in regard to divorce are the heart of America prosperity and dominance.

We become really ironical when we glance at the historical record of the church in this matter. What the Catholic calls the Fathers of the Church, whose chief distinction was that they regarded fatherhood as a filthy business to be avoided by all good men, did not bother much about divorce. It was better to be married than burn, they said, after Paul—it is certainly more comfortable, we agree—but if you were one of those miserable weaklings who can't sleep without a companion in bed at least one is enough for a life time. But the body of the faithful took no notice what they said, except, of course, on more important matters like the Trinity of the power of bishops, and got their divorces under Roman law just like other folk. When the pious emperor Theodosius, who massacred people by the thousand for insulting his dignity, had the law improved and codified he still allowed divorce on many grounds, though the clergy induced him to hamper it, and his successors, equally pious Christians, had to increase the number of grounds of divorce to 10. When the good Christian emperor Justinian who married the most notorious whore in his empire, again codified the law he granted seven grounds of divorce. In short, as late as the 10th

century divorce was granted in the church on five or six grounds; more than it is in most countries today.

Then in the 11th century, came the triumph of the puritans under Hildebrand or Pope Gregory VII. By the cracking of many skulls, the shedding of much blood, and a great outpour of language that it would cost you \$10 a word (in fines) to repeat in public today, Gregory's lieutenants dissolved the marriages of the clergy and then declared that marriage is indissoluble. This is one of the great reforms or uplifts for which you will find Gregory with a halo in our encyclopedias and most historical books. It purified morals and raised marriage to a much higher level. In point of fact it inaugurated one of the gayest and loosest periods in history. Every genuine authority on each country in Europe from 1100 to 1500 A.D. describes a social condition which for violence, injustice, and sexual freedom, surpasses any other historical period of even half that duration; and in Catholic lands the sexual freedom continued after 1500.

But do not imagine that this was simply a safety valve under the pressure of indissoluble marriage. The leading historical experts on France in the 13th century, Professor Luhaire, says of the ladies of the upper class: "Practically all of them had three or four husbands"—successive husbands, of course, or the life of each would have been short. The church found (in its inventions department) that a marriage to a relative is invalid from the start and that you could be related to another person as far as fifth cousins and way back to your great-great-grandparents. You were related by blood, marriage, or mere fun and games. As common folk in those days rarely went 10 miles from home and were playful everybody was related to everybody, and as the gentry were equally sportive in their class, it was 10 to one you were related to your wife. Remember that the relationship might go back four or five generations and reached out as far as fourth or fifth cousins. In this distressing situation the church (which created it) came as usual to the relief of its children. You could buy a dispensation before marriage, though on account of the shortage of paper or parchment most people did not bother, or you could pay, if you did not find your marriage congenial, to have the learned theologians or canonists trace the relationship which surely existed somewhere or other, or (as happened in certain famous cases) get the bishops to examine your wife's body and see if there was not some invalidating defect, or, if you were fairly tough, you could just swear that it was a buckshot wedding or something, and that when you said "I will" you really meant "won't" in your mind. So vast numbers of indissoluble marriages were found never to have been marriages at all.

That goes on still. While, in the present century, Catholic preachers were thundering against divorce rich Catholic ladies were buying declarations that their marriages, which had been fruitful, had never been valid. Joseph McCabe gives a number of modern cases in his works. Catholics cannot dispute the notorious fact that these rich folk got their marriages declared invalid—or, if you prefer it, that they had never been married—but deny that it is done only for the rich. Costly as the inquiry is, they say, it is not confined to the rich. Unfortunately, the alleged cases of poor Catholics who benefit in this way seem to be all in lands where it is completely impossible to check the details, while the only cases in Britain and America must have involved tens of thousands of dollars. In plain English, from 1100 onward the suppression of divorce has been a little gold-mine to the clergy, a little hell to Catholic women, and a most pernicious interference with the common social rights of both men and women.

* * *

THE GREAT ILLUSION

In 1910 an ex-cowboy economist who wrote as "Norman Angell" startled the world with a book called "The Great Illusion." It had a

large circulation. It proved to demonstration that victory in war does not even pay the victors. The world's pacifists felt that no one would go to war after that, so the world drifted into the first World War. Candidly, we can't say that it did not pay the victors. France got Alsace-Lorraine and their vast deposits of coal, iron, and potash. Italy got spoils out of all proportion to its merits. Poland got a monstrous extension, and Yugo-Slavia was almost as generously rewarded. Britain got more slices of Africa, and Japan more hold on China. However, when the war-clouds gathered again the pacifists chanted that war doesn't pay, so the statesmen of the democracies were left free to do nothing to hinder Hitler and Mussolini from carrying out their professed aim to exterminate Socialism. Has war paid the victors this time? The smaller powers get their usual slices of territory but Britain and America, who did most, have not yet clearly gained anything. Britain has lost India, the route to which it made enormous sacrifices to defend. America has not got and seems less than ever likely to get those immense world-markets for American products which it sought. Yet there are more people in America demanding a third World War than there were demanding war in 1917 or in 1942.



CHANCE IN GREAT DISCOVERIES

The modern overhauling of old traditions and beliefs has, amongst other things, discredited many fascinating stories about chance at the root of great discoveries. That Newton was led to discover the law of gravitation by an apple falling on his head is no more true than the story of William Tell and the apple. That Watt discovered the power of steam (which drove engines long before his time) by watching a kettle boil is as fictitious as a Lourdes miracle or a Bronx apparition of the Virgin. But it is true that discoveries which have led to applications of science of the greatest importance began with chance observations. X-rays were discovered by Roentgen observing electrical disturbances across the room when he was experimenting for a very different purpose. The discovery of the photo-electric cell, which has made the talkies possible, began with an operator in a cable-station casually noticing variations in his instruments when sun-light fell upon them. The whole portentous science of radiation and the atomic physics to which it led began when Becquerel packed up his piece of uranium-compound one night and found it had photographed an object through the wrapping during the night. A chemist was led to discover saccharin, which has been an inestimable blessing to Europe during the last seven years, by casually licking his fingers during an experiment. And the moral of all this is that we do not know the hour or the day when equally important new avenues of discovery will be opened up. There are now 10 laboratories to one and more than 10 observers to one in comparison even with half a century ago.



